

## CLAIMS

What is claimed is:

*Sub A 17*  
1. A method for efficiently merging subnets comprising the steps of:

3  
4 linking a first subnet having a first subnet manager  
5 and a first database with a second subnet having a second  
6 subnet manager and a second database to create a merged  
7 subnet; and

8  
9 dynamically selecting one of said first subnet manager  
10 and said second subnet manager as a master subnet manager,  
11 which controls the merged subnet.

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6 2. The method of Claim 1, wherein said first and second  
database comprise configuration entries including a  
partition key (P Key) and a global unique identifier  
(GUID), which are time-stamped with a time said  
configuration entries are modified by respective ones of  
said first and second subnet managers.

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7 3. The method of Claim 2, wherein said first subnet  
manager is selected as said master subnet manager, said  
method further comprising the step of:

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7 absorbing said subnet configuration entries from said  
database of the other subnet manager to said database of  
said master subnet manager to create a merged database.

1       4. The method of Claim 3, wherein said absorbing step  
2       further comprises the steps of:

3               determining that a first GUID entry of said second  
4       database is the same as a second GUID entry of said first  
5       database; and

6               in response to said determining step, selecting a  
7       latest time-stamped GUID entry from among said first GUID  
8       entry and said second GUID entry as a representative GUID  
9       entry for said merged database.

10       5. The method of Claim 4, further comprising the step of  
11       discarding a GUID entry not selected as said representative  
12       GUID entry.

13       6. The method of Claim 4, wherein said absorbing step  
14       further comprises the steps of:

15               determining that a first P\_Key entry of a GUID of said  
16       second database of said other subnet manager is the same as  
17       a second P\_key entry of a different GUID of said first  
18       database;

19               in response to said determining step, changing all  
20       occurrences of said P\_Key in said second database to a new  
21       P\_Key value.

22       7. The method of Claim 6, wherein said changing step  
23       further comprises the step of selecting only a P-Key value  
24       that is not one of said P\_Key values within said first  
25       database and said second database.

1       8. The method of Claim 3, further comprising the step of  
2       configuring said merged subnet utilizing said master subnet  
3       manager.

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1       9. A computer program product comprising:

2               a computer readable medium; and

3               program instructions on said computer readable medium  
4               for:

5               linking a first subnet having a first subnet manager  
6               and a first database with a second subnet having a second  
7               subnet manager and a second database to create a merged  
8               subnet; and

9               dynamically selecting one of said first subnet manager  
10              and said second subnet manager as a master subnet manager,  
11              which controls the merged subnet.

12              10. The computer program product of Claim 9, wherein said  
13              first and second database comprise configuration entries  
14              including a partition key (P\_Key) and a global unique  
15              identifier (GUID), which are time-stamped with a time said  
16              configuration entries are modified by respective ones of  
17              said first and second subnet managers.

18              11. The computer program product of Claim 10, wherein said  
19              first subnet manager is selected as said master subnet  
20              manager, said program product further comprising program  
21              instructions for:

22               absorbing said subnet configuration entries from said  
23              database of the other subnet manager to said database of  
24              said master subnet manager to create a merged database.

1       12. The computer program product of Claim 11, wherein said  
2       absorbing instructions further comprises program  
3       instructions for:

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5       determining that a first GUID entry of said second  
6       database is the same as a second GUID entry of said first  
7       database; and

8  
9       in response to said determining step, selecting a  
10      latest time-stamped GUID entry from among said first GUID  
11      entry and said second GUID entry as a representative GUID  
12      entry for said merged database and discarding an older  
13      time-stamped entry.

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15      13. The computer program product of Claim 12, further  
16      comprising program instructions for discarding a GUID entry  
17      not selected as said representative GUID entry.

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19      14. The computer program product of Claim 12, wherein said  
20      absorbing instructions further comprises program  
21      instructions for:

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23       determining that a first P\_Key entry of a GUID of said  
24       second database of said other subnet manager is the same as  
25       a second P\_key entry of a different GUID of said first  
26       database;

27  
28       in response to said determining step, changing all  
29       occurrences of said P\_Key in said second database to a new  
30       P\_Key value.

1       15. The computer program product of Claim 14, wherein said  
2        changing instructions further comprises program  
3        instructions for selecting only a P-Key value that is not  
4        one of said P\_Key values within said first database and  
5        said second database.

1       16. The computer program product of Claim 11, further  
2        comprising program instructions for configuring said merged  
3        subnet utilizing said master subnet manager.

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1       17. A system comprising:

2               a first subnet with a first subnet manager and a first  
3               database of subnet entries;

4               a second subnet with a second subnet manager and a  
5               second database of subnet entries, wherein said second  
6               subnet is coupled to said first subnet;

7               logic components for selecting a master subnet manager  
8               from among said first subnet manager and said second subnet  
9               manager; and

10               software logic associated with said master subnet  
11               manager for merging said first database and said second  
12               database.

13       18. The system of Claim 17, wherein:

14               said first subnet manager is said master subnet  
15               manager; and

16               said first subnet manager absorbs configuration  
17               entries from said second database into said first database  
18               to create a merged database.

19. The system of claim 18, wherein said first subnet  
2               manager controls and manages said system utilizing said  
3               merged database.

20. The system of Claim 17, wherein said first subnet  
2               manager determines when a first GUID entry in said first

3       database is the same as a second GUID entry in said second  
4       database and dynamically selects a latest time-stamped  
5       entry from among both of said first and second GUID entries  
6       for inclusion in said merged database and discarding an  
7       older time-stamped entry.

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